



# Indiana Crop & Weather Report

United States Dept of Agriculture

Indiana Agricultural  
Statistics Service

1435 Win Hentschel Blvd.  
Suite B105

West Lafayette, IN 47906-4145  
(765) 494-8371

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## CROP REPORT FOR WEEK ENDING MAY 25

### AGRICULTURAL SUMMARY

Farmers resumed planting of corn and soybeans during the middle part of the last week. Drier weather conditions allowed for extensive field activities. Cool, wet conditions are delaying crop growth and emergence in corn and soybeans, according to the Indiana Agricultural Statistics Service. Corn planting is beginning to wind up while soybean planting took a big jump from the previous week. Corn planting is 5 days behind average. Soybean planting is about 11 days behind the average pace. Some replanting is taking place and will be necessary in drowned out areas.

### FIELD CROPS REPORT

There were 3.1 **days suitable for fieldwork**. Seventy-three percent of the intended **corn** acreage is planted compared with 39 percent last year and 84 percent for the 5-year average. By area, 85 percent of the corn acreage is planted in the north, 78 percent in the central region and 39 percent in the south. Fifty-seven percent of the corn acreage has **emerged**, compared with 12 percent last year and 65 percent for the average. Forty percent of the **soybean** acreage is planted compared with 17 percent last year and 66 percent for the average. By area, 56 percent of the soybean acreage is planted in the north, 42 percent in the central region and 11 percent in the south. Twenty-two percent of the soybean acreage has **emerged** compared with 4 percent last year and 44 percent for the average.

Eighty-three percent of the winter wheat is **headed** compared with 74 percent last year and 88 percent for the average. Winter wheat **condition** is rated 81 percent good to excellent compared with 57 percent last year at this time.

Major activities during the week were repairing equipment, moving grain to market, mowing hay and roadsides, planting corn and soybeans, hauling manure and taking care of livestock.

### LIVESTOCK, PASTURE AND RANGE REPORT

**Pasture condition** is rated 18 percent excellent, 61 percent good, 19 percent fair and 2 percent poor. Pastures and forage crops continue to improve aided by the recent showers. Livestock remain in mostly good condition. Spring calving is starting to slow down.

### CROP PROGRESS TABLE

Crop	This Week	Last Week	Last Year	5-Year Avg
Corn Planted	73	61	39	84
Corn Emerged	57	45	12	65
Soybeans Planted	40	25	17	66
Soybeans Emerged	22	12	4	44
Winter Wheat Headed	83	62	74	88
Tobacco Plants Set	7	4	9	23

### CROP CONDITION TABLE

Crop	Very Poor	Poor	Fair	Good	Excellent
Percent					
Pasture	0	2	19	61	18
Winter Wheat 2003	1	3	15	57	24
Winter Wheat 2002	2	9	32	48	9

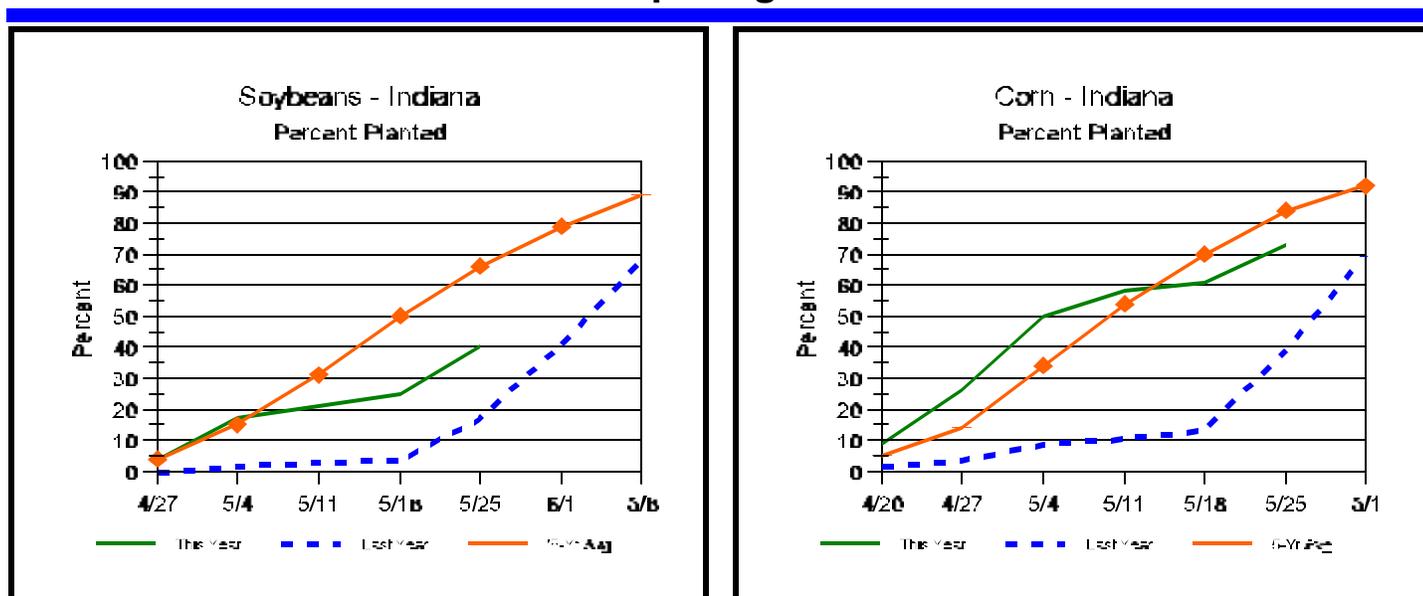
### SOIL MOISTURE & DAYS SUITABLE FOR FIELDWORK TABLE

	This Week	Last Week	Last Year
Percent			
<b>Topsoil</b>			
Very Short	0	0	0
Short	0	0	0
Adequate	56	31	53
Surplus	44	69	47
<b>Subsoil</b>			
Very Short	0	0	0
Short	4	4	0
Adequate	60	50	53
Surplus	36	46	47
<b>Days Suitable</b>	3.1	1.0	4.3

### CONTACT INFORMATION

--Greg Preston, State Statistician  
 --Bud Bever, Agricultural Statistician  
 E-Mail Address: [nass-in@nass.usda.gov](mailto:nass-in@nass.usda.gov)  
<http://www.nass.usda.gov/in/index.htm>

## Crop Progress



### Other Agricultural Comments And News

#### Heat Unit Concepts Related to Corn Development

Growth and development of corn are strongly dependent on temperature. Corn develops faster when temperatures are warmer and more slowly when temperatures are cooler. For example, a string of warmer than normal days in late spring will encourage faster leaf development than normal. Another example is that a cooler than normal grain filling period will delay the calendar date of grain maturity.

The phrases “string of warmer than normal days” and “cooler than normal grain filling period” can be converted mathematically into measures of thermal time by calculating the daily accumulations of heat. Commonly used terms for thermal time are Growing Degree Days (GDDs), Growing Degree Units (GDUs), or heat units (HUs).

Different methods exist for calculating heat units depending on a) the crop or biological organism of interest and b) the whim or personal preference of the researcher. The calculation method most commonly used throughout the U.S. for determining heat unit accumulation relative to corn phenology is the formula first suggested by the National Oceanic and Atmospheric Administration in 1969 and labeled as the ‘Modified Growing Degree Day’ formula in 1971.

This method calculates daily accumulation of GDDs as the average daily temperature (degrees F) minus 50. The “modification” refers to the limits imposed on the daily maximum and minimum temperatures allowed in the calculation. Daily maximums greater than 86 degrees F are set equal to 86 in the

calculation of the daily average temperature. Similarly, daily minimums less than 50 degrees F are set equal to 50 in the calculation.

**Example 1:** If the daily maximum temperature was 80 degrees F and the minimum was 55 degrees F, the GDD accumulation for the day would be  $((80 + 55)/2) - 50$  or 17.5 GDDs.

**Example 2 (Illustrating the limit on daily maximums):** If the daily maximum temperature was 90 degrees F and the minimum was 72 degrees F, the GDD accumulation for the day would be  $((86 + 72)/2) - 50$  or 29 GDDs.

**Example 3 (Illustrating the limit on daily minimums):** If the daily maximum temperature was 68 degrees F and the minimum was 41 degrees F, the GDD accumulation for the day would be  $((68 + 50)/2) - 50$  or 9 GDDs.

In late April to early May, normal daily GDD accumulations for central Indiana are about 10 GDDs. By late July, the normal daily accumulation rises to about 23 GDDs. For a typical corn growing season in central Indiana, say from late April to late September, the total seasonal accumulation of GDDs is about 2800 GDDs.

Historical normal GDD accumulations on a weekly basis for Indiana’s nine Crop Reporting Districts are available in Purdue’s *Corn & Soybean Field Guide*, Extension publication # ID-179. Daily or monthly normal GDD accumulations for Indiana are also

(Continued on Page 4)

# Weather Information Table

**Week ending Sunday May 25, 2003**

Station	Past Week Weather Summary Data							Accumulation					
	Air						Avg	April 1, 2003 thru May 25, 2003					
	Temperature			Precip.			4 in	Precipitation			GDD Base 50°F		
	Hi	Lo	Avg	DFN	Total	Days	Soil Temp	Total	DFN	Days	Total	DFN	
<b>Northwest (1)</b>													
Chalmers_5W	77	40	59	-6	0.21	1	61	9.23	+2.43	23	392	-11	
Valparaiso_AP_I	72	40	57	-6	0.14	3		8.52	+1.48	21	356	+29	
Wanatah	73	37	56	-6	0.25	2	62	9.34	+2.61	21	306	+22	
Wheatfield	73	38	57	-5	0.09	1		9.11	+2.56	19	366	+60	
Winamac	70	38	56	-7	0.48	2	59	7.28	+0.80	21	363	+14	
<b>North Central(2)</b>													
Plymouth	70	40	56	-8	0.43	2		7.92	+1.02	20	324	-44	
South_Bend	72	37	56	-6	0.57	2		9.17	+2.80	20	352	+44	
Young_America	72	42	58	-6	0.29	2		6.81	+0.34	22	416	+72	
<b>Northeast (3)</b>													
Columbia_City	74	39	57	-5	0.27	2	56	8.73	+2.31	26	332	+48	
Fort_Wayne	72	40	57	-6	0.46	2		8.98	+2.85	20	354	+29	
<b>West Central (4)</b>													
Greencastle	76	37	59	-7	0.15	2		7.41	-0.14	24	436	-8	
Perrysville	80	42	60	-5	0.11	1	61	7.08	-0.04	19	492	+104	
Spencer_Ag	76	41	60	-4	0.23	2		8.25	+0.32	25	492	+99	
Terre_Haute_AFB	76	41	61	-4	0.00	0		7.47	-0.09	19	530	+89	
W_Lafayette_6NW	76	40	58	-6	0.27	2	63	8.23	+1.35	25	452	+102	
<b>Central (5)</b>													
Eagle_Creek_AP	74	42	60	-6	0.01	1		7.11	+0.16	20	505	+75	
Greenfield	74	40	59	-6	0.10	1		8.47	+0.92	23	463	+76	
Indianapolis_AP	75	41	60	-6	0.05	1		7.66	+0.71	20	518	+88	
Indianapolis_SE	74	41	59	-6	0.00	0		7.56	+0.18	19	472	+61	
Tipton_Ag	73	42	58	-5	0.00	0	65	10.43	+3.43	17	371	+56	
<b>East Central (6)</b>													
Farmland	75	42	59	-4	0.00	0	59	6.50	-0.09	19	411	+107	
New_Castle	71	38	56	-6	0.02	1		5.49	-2.16	19	346	+33	
<b>Southwest (7)</b>													
Evansville	79	47	63	-5	0.33	5		9.26	+1.35	27	667	+90	
Freelandville	76	48	62	-4	0.13	2		10.76	+2.77	23	564	+96	
Shoals	77	45	62	-4	0.33	3		9.91	+1.51	22	567	+114	
Stendal	77	46	62	-5	0.62	4		12.31	+3.65	24	619	+102	
Vincennes_5NE	77	46	62	-4	0.63	4		10.19	+2.20	26	584	+116	
<b>South Central(8)</b>													
Leavenworth	76	46	62	-3	0.53	3		10.14	+1.63	27	586	+127	
Oolitic	78	41	61	-4	0.32	3	63	9.43	+1.51	25	529	+119	
Tell_City	79	50	64	-3	0.24	2		11.49	+2.76	22	722	+189	
<b>Southeast (9)</b>													
Brookville	76	42	61	-3	0.56	2		7.10	-0.55	21	534	+178	
Milan_5NE	77	43	60	-3	0.46	3		9.13	+1.48	28	497	+141	
Scottsburg	77	42	62	-5	0.37	3		11.78	+3.95	26	555	+83	

DFN = Departure From Normal (Using 1961-90 Normals Period).

GDD = Growing Degree Days.

Precipitation (Rainfall or melted snow/ice) in inches.

Precipitation Days = Days with precip of .01 inch or more.

Air Temperatures in Degrees Fahrenheit.

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## Heat Unit Concepts Related to Corn Development (Continued)

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available at the Indiana Climate Page Web site (Scheeringa, 2003).

Obviously, the ability to calculate daily heat unit accumulations is dependent on your having access to daily maximum and minimum temperatures. If you do not have your own max/min recording thermometer, you can guesstimate the daily highs and lows by manually recording the temperatures shortly after sunrise (approximate daily low) and late in the afternoon (approximate daily high).

Daily temperature data for specific locations throughout Indiana are also recorded and reported at the Indiana Climate Page Web site (Scheeringa, 2003). In lieu of recording your own daily temperatures, you can use those of the nearest reporting station. Finally, the weekly Purdue Pest & Crop Newsletter lists accumulated GDDs for selected sites across the state based on various start dates.

### Related References:

Nielsen, Bob. 2003. Use Thermal Time to Predict Leaf Stage Development in Corn. Purdue Univ. Online at <http://www.kingcorn.org/news/articles.03/LeafStagePredict-0520.html>. [URL verified 5/20/03].

Purdue University. 2003. Corn & Soybean Field Guide (ID-179). To order, call Purdue Extension toll-free at (888) 398-4636 (EXT-INFO) and ask for the Media Distribution Center. Or download an order form online at <http://www.agry.purdue.edu/dtc/pdf/order.pdf>. [URL verified 5/20/03].

Purdue University. 2003. Pest & Crop Newsletter. Online at [http://www.entm.purdue.edu/entomology/ext/ext\\_newsletters.html](http://www.entm.purdue.edu/entomology/ext/ext_newsletters.html). [URL verified 5/20/03].

Scheeringa, Ken. 2003. Indiana Climate Page. Online at <http://shadow.agry.purdue.edu/sc.index.html>. [URL verified 5/20/03].

For other Corny News Network articles, browse through the CNN Archives at <http://www.kingcorn.org/news/index-cnn.html>. For other information about corn, take a look at the CornGrowers' Guidebook at <http://www.kingcorn.org>.

Bob Nielsen, Department of Agronomy, Purdue University.

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